

Serial No. 09/729,768

Docket No. HI-029

Amdt. Dated November 12, 2003

Reply to Office Action of August 13, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for increasing voice recognition rate in a voice recognition system comprising ~~the steps of:~~

establishing a reference model for user voices subjected to recognition;

receiving the user voices for voice recognition commands;

detecting the range and characteristics of the received voice data;

comparing the range and characteristics of the detected voice data with the characteristics of the previously obtained reference voice model to retrieve a word having the largest similarity;

comparing the similarity of the retrieved word with the similarity reference value to report a voice recognition failure when the compared result is below the reference value, and to report a voice recognition success and perform the command corresponding to the recognized word when the compared result is at least the reference value; and

modifying the characteristics of the voice data which succeeded in the voice recognition into the reference voice model which was used in the corresponding voice recognition.

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2. (Currently Amended) The method ~~for increasing voice recognition rate in a voice recognition system~~ in accordance with claim 1, wherein the characteristics of the voice data are expressed in characteristic vectors which are applied with entering patterns including at least one of LPC(Linear Predictive Coding) coefficient, cepstrum and differential cepstrum coefficient ~~and~~ etc.

A 3. (Currently Amended) A method for increasing voice recognition rate in a voice recognition system comprising ~~the steps of:~~

detecting the characteristics of voice data received from a user;

comparing the detected characteristics with a previously established reference voice model to judge success or failure of the voice detection; and

establishing each of the voice data succeeded in the voice detection to the reference voice model of the corresponding voice.

4. (New) The method of claim 3, wherein the characteristics of the voice data are expressed in vectors.

5. (New) The method of claim 4, wherein the vectors are determined using at least one of Linear Predictive Coding (LPC) coefficient, cepstrum and differential cepstrum coefficient.

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6. (New) The method of claim 3, further comprising:

performing an operation associated with the reference voice model upon success of the voice detection.

7. (New) A voice recognition method comprising:

comparing voice data from a user with a reference voice model of previously entered voice data.

determining if the voice data from the user corresponds to the reference voice model; and

updating the reference voice model using the voice data from the user, upon a positive correspondence of the reference voice model and the voice data from the user.

8. (New) The method of claim 7, wherein the voice model comprises voice data expressed in vectors.

9. (New) The method of claim 8, wherein the vectors are determined using at least one of Linear Predictive Coding (LPC) coefficient, cepstrum and differential cepstrum coefficient.

10. (New) The method of claim 8, wherein updating the reference voice model comprises:

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generating vectors representing the voice data from the user;

combining the vectors representing the voice data from the user with the vectors of the voice model, thereby updating the voice model.

11. (New) The method of claim 7 wherein determining if the voice data from the user corresponds to the reference voice model comprises:

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comparing a similarity of the voice data from the user to the reference voice model; and

indicating the positive correspondence if the similarity is greater than or equal to a reference value.

12. (New) The method of claim 11 wherein comparing the similarity comprises:

comparing similarity of the voice data from the user to a plurality of reference voice models of a plurality of previously entered voice data; and

selecting the reference voice model that has the largest similarity.

13. (New) The method of claim 11 further comprising:

indicating a recognition failure if the similarity is less than the reference value.

14. (New) The method of claim 7 further comprising:

indicating the positive correspondence of the reference voice model and the voice data from the user; and

performing an operation associated with the reference voice model.

15. (New) The method of claim 7, wherein the voice data from the user represents at least one of a word, a phrase, and a command.

16. (New) The method of claim 15, wherein the reference voice model is associated with at least one of a word, a phrase, and a command.

17. (New) The method of claim 16, further comprising:

executing the command associated with the reference voice model upon the positive correspondence of the reference voice model and the voice data from the user.
